Environmental Science and Policy 81 (2018) 36–45

Contents lists available at ScienceDirect

Environmental Science and Policy

journal homepage: www.elsevier.com/locate/envsci

Mainstreaming climate change adaptation into the European Union's development assistance

Frederik De Roeck*, Jan Orbie, Sarah Delputte

Centre for EU Studies, Ghent University, Universiteitstraat 8, 9000 Ghent, Belgium

ARTICLE INFO

Keywords:
Climate change adaptation
Environmental policy integration
Mainstreaming
European union
Development cooperation

ABSTRACT

This paper aims to provide a comprehensive analysis of mainstreaming efforts regarding climate change adaptation (CCA) in EU development cooperation. By constructing and operationalising an analytical framework capable of tracing the level of mainstreaming throughout different phases of the policy cycle, we provide an answer to the question 'what works and what doesn't' in the integration of climate change in development cooperation. We combine a document analysis with semi-structured expert interviews, encompassing both HQ level in Brussels as well as EU aid activities in nine different developing countries. Our findings indicate that the Commission envisions a harmonisation approach towards CCA mainstreaming, targeting aid activities related to sustainable agriculture, food security and rural development. Although the toolbox for mainstreaming allows for a prioritisation of CCA, the procedural approach is currently ineffective due to limited staff and mainstreaming fatigue. In contrast, the growing political salience of CCA mainstreaming can be considered the main driver of mainstreaming efforts in the Commission.

1. Introduction

Aid donors increasingly perceive climate change adaptation (CCA) and development cooperation as a two-way street: CCA demands 'climate proofing' of development activities to ensure their sustainability, while aid can also strengthen partner countries' resilience to climate change (Gupta, 2009). As a leading international donor, also the European Union (EU) has acknowledged the need to 'mainstream' climate change into its bilateral aid policies in its guiding documents on international cooperation (European Commission, 2006, 2011, 2017).

This paper aims to provide a comprehensive analysis of CCA mainstreaming within EU development cooperation for the current policy cycle (2014–2020). For this purpose we operationalise an analytical framework that traces the level of mainstreaming in different policy phases. Despite the growing literature on environmental policy integration (EPI) and climate policy integration (CPI) (Lafferty & Hovden 2003; Adelle & Russel 2013), empirical evidence regarding their implementation and influencing factors remains scarce (Persson et al. this issue). There is thus a need for taking stock of what is already being done under the banner of EPI, by evaluating its performance in different contexts. Such efforts can lead us to generalizable knowledge on effective EPI strategies (ibid.; Nilsson & Persson 2017). Second, we aim to contribute to the EU foreign policy literature. Despite the EU's image as the world's largest development donor and international climate leader, the inclusion of climate concerns in EU external relations is still largely uncharted territory (notwithstanding notable exceptions: Peskett et al., 2009; Gupta & van der Grijp 2010).

We will start by constructing an analytical framework that distinguishes between four phases of the policy cycle: agenda-setting, the policy process, policy output phase and implementation. Within every phase, we will further differentiate between three 'levels' of mainstreaming: coordination, harmonisation and prioritisation. This allows examining how and to what extent the cross-cutting issue of CCA mainstreaming is being translated from a general policy commitment to a concrete issue in EU development projects.

In analysing the policy cycle, we first examine how CCA is represented in some of the main EU development policy documents. Subsequently, we provide an overview of the mainstreaming 'toolbox' designed by Commission agencies, being the Directorate-Generals for Development Cooperation (DEVCO) and Climate Action (CLIMA). This is combined with an inquiry into mainstreaming within EU aid activities in nine developing countries: Ghana, Niger, Malawi, Ethiopia, Sierra Leone, Angola, Zambia, Uganda and Chad. We identify typical cases for the sake of generating a representative image of mainstreaming efforts. For every country, an analysis is made of the programming and implementation documents of EU aid: National Indicative Programmes (NIPs) and Annual Action Programmes (AAPs). In addition, 12 semi-structured expert interviews with EU officials were

* Corresponding author.
E-mail addresses: Frederik.Deroeck@Ugent.be (F. De Roeck), Jan.Orbie@Ugent.be (J. Orbie), Sarah.Delputte@Ugent.be (S. Delputte).

https://doi.org/10.1016/j.envsci.2017.12.005
Received 3 July 2017; Received in revised form 4 December 2017; Accepted 6 December 2017
Available online 20 December 2017
1462-9011/ © 2017 Elsevier Ltd. All rights reserved.

conducted, both at headquarter level in Brussels as well as within EU delegations[1] in all selected countries.

Our analysis is followed by a discussion linking back to the broader EPI/CPI literature, followed by a number of policy-relevant recommendations. We conclude by providing some potential paths for further research.

2. Analytical framework

Literature on mainstreaming climate change in development has expanded in recent years (cf. Klein et al., 2007; Lauer and Eguavoen 2016). Overall, existing work strongly focuses on incorporating climate adaptation in development cooperation. Whereas mitigation measures are mostly confined to specific sectoral aid activities like energy infrastructure, adaptation relates to reducing the vulnerability to adverse climate change impacts, implying a broad spectrum of affected sectors and policy responses (Huq and Reid 2004). Thus, linkages between CCA and activities of donors are plentiful and development cooperation has a distinct role to play in increasing the adaptive capacity of societies within the Global South, targeting the underlying drivers of climate vulnerability (Klein et al. 2007).

Existing literature can be situated in the broader body of work on environmental policy integration (EPI) and climate policy integration (CPI). EPI is considered to be an indispensable part of sustainable development, and is generally defined as the act of "incorporating environmental concerns in sectoral policies outside the traditional environmental policy domain" (Runhaar, Driessen & Uittenbroek 2014, p. 233). This paper will focus on CPI, which emerged as a specific form of EPI because of the growing international attention towards climate change (Adelle and Russel 2013).

The literature is less straightforward on conceptual delineations of the terms 'integration' and 'mainstreaming'. Some ascribe the difference in terminology to merely differences in context. Yamin (cited in Adelle and Russel 2013, p. 3) argues that the term 'climate mainstreaming' simply resonates more within development studies, as it lines up with other topics like mainstreaming gender and disaster risk reduction. In contrast, Gupta (2010: p. 79) does make a conceptual distinction, arguing that mainstreaming implies climate change "becoming the overriding objective" and that there is a proactive engagement with the issue. In contrast, "integration" according to her refers to a more reactive approach, in which climate change is being taken into account as an "add-on, end of pipe solution". This links back to a similar typology within the EPI literature: according to Lafferty and Hovden (2003), EPI can be separated from conventional notions of policy integration, because EPI ideally implies environmental objectives to be given 'principled priority', thus installing environmental objectives as overarching priorities in other policy domains (ibid.). In sum, the typologies of both Gupta and Lafferty & Hovden differentiate between 'weak' policy integration – a reactive, add-on approach to integrating CCA in development – and principled priority or mainstreaming – when CCA becomes the overriding objective in development cooperation.

More specifically, we will distinguish between four levels of policy integration: no integration, coordination (removing contradictions between policies), harmonisation (realising synergies between policies), and prioritisation (favouring CCA-related objectives) (Lafferty and Hovden 2003; Persson, Persson et al. this issue). While 'coordination' and harmonisation' can be placed under the banner of 'weak' policy integration, 'prioritisation' implies that CCA becomes pivotal in aid activities.

Within this paper, we aim to provide a comprehensive oversight of CCA mainstreaming efforts within EU development cooperation, by tracing it through various phases of the policy cycle. Already in 2006, the European Court of Auditors hinted at an implementation gap regarding climate mainstreaming in EU aid activities (ECA, 2006). This is a recurring observation within the existing literature: despite growing attention for climate change within the development community, mainstreaming commitments often do not result in adequate changes in policy practices (cf. Lauer and Eguavoen 2016). Somewhere along the line, the normative mainstreaming commitment thus becomes diluted and fails to materialise in development projects. However, no efforts have been undertaken to look into the persistence of this implementation gap within EU aid activities over the years. This study wants to fill the void by looking at mainstreaming efforts within the current aid cycle (2014–2020).

Such an inquiry also creates added value within the broader EPI/CPI literature. As Persson et al. argue in this special issue, research increasingly moves beyond conceptual studies into the empirical realm, by taking stock of what is being done under the EPI/CPI banner and to answer the question "what works where, when and how?" (Persson et al. this issue). Answering this question requires a detailed knowledge of the initial normative commitment to mainstreaming, the institutional setup, the available policy tools and their usage among policy makers. Thus, tracing mainstreaming efforts throughout the policy cycle is the best approach to find out what can be considered 'effective' policy interventions and to identify possible glitches in this regard.

We will focus on four different phases of the policy cycle (based on Persson, Persson et al. this issue):

1. Agenda-setting: to what extent is the initial need for mainstreaming articulated?
2. Policy process: what are the administrative routines and procedures available to facilitate mainstreaming?
3. Policy output: to what extent are CCA-objectives included in broad policy frameworks?
4. Policy implementation: To what extent are CCA-objectives included in the project design?

Thus, linking our policy cycle-based approach to our distinction between four 'levels' of CCA mainstreaming, our analytical framework allows us to track the level of CCA mainstreaming in each of the four phases of the policy cycle (Table 1).

Of course, mainstreaming CCA in other policy domains is a complex endeavor and is bound to face difficulties. According to Uittenbroek et al. (2013), the mainstreaming process should be perceived as fundamentally dynamic, with its scope being constantly reconsidered due to new opportunities and/or barriers. Examples of such influencing factors are the availability of information and financial resources, the organisational and institutional setup for mainstreaming, and social and cultural differences resulting from differences in worldviews between groups (Adger et al. cited in Uittenbroek et al., 2013; Moser and Ekstrom, 2010). After tracking CCA mainstreaming in the different policy phases, we will discuss the influence of such factors on overall CCA mainstreaming (cf. 'Discussion and policy relevance').

3. Methods and operationalisation

First of all, we will operationalise the level of CCA mainstreaming by examining its framing in different stages of the policy cycle. Coordination will be operationalised as representing mainstreaming as an add-on component in aid activities. Put simply, CCA could just be incidentally mentioned in EU policy documents, without considering its influence on development activities. At best, coordination implies mainstreaming CCA in terms of end-of-pipe solutions, focused at mitigating the potentially negative impact of aid activities (Runhaar, Driessen & Soer 2009). Harmonisation implies that CCA is on equal terms with development activities in different phases of the policy cycle. Thus, mainstreaming would be framed as the need to find synergies between both. In the policy output- and implementation phase,

[1] EU delegations are the main implementing agencies for development cooperation in partner countries.

Table 1
CCA mainstreaming in different phases of the policy cycle.

Level of integration	No integration	'Weak' integration		Principled priority
Policy stage		Coordination	Harmonisation	Prioritisation
Agenda-setting				
Policy process				
Policy output				
Policy implementation				

harmonisation would be apparent if CCA is clearly interlinked with the projected aid activities, including references to how it affects the focal sector in question and how it can be addressed through planned interventions. Finally, prioritisation implies that the development rationale of the Commission is reframed in light of CCA (Gupta, 2010). In later phases of the policy cycle, CCA would become the central reference point for designing sectoral intervention priorities and development projects. A full operationalisation per phase in the policy cycle can be found in Table 2.

In order to track CCA mainstreaming in different phases of the policy cycle, different data will be examined. Within the agenda-setting phase, we analyse how the Commission makes the case for CCA mainstreaming, by assessing the inclusion of the issue in the main policy documents underpinning EU development assistance, complemented with targeted expert interviews within the European Commission's DG DEVCO and DG CLIMA. For the policy process phase, we provide an overview of the available mainstreaming tools and look specifically at their usage by practitioners in the field. In order to map out this toolbox, we consulted the Commission guidelines for environmental- and climate mainstreaming, while again adding data from targeted expert interviews. Its actual use was assessed through semi-structured interviews with climate focal persons in active in EU delegations in nine partner countries.

Within the policy output phase, we examine the integration of CCA in the multi-annual policy frameworks for each of the nine countries (NIPs). These illustrate EU development priorities, disseminated per focal sector. Finally, within the policy implementation phase, we investigate CCA mainstreaming within the design of concrete development projects – reflected in AAPs,[2,3] once again complemented with data from interviews with climate focal persons in delegations.

Our research can be considered explorative in nature, aimed at investigating representative cases for EU mainstreaming efforts as a whole. Therefore, our case selection strategy is based on a typical case design (Seawright and Gerring 2008). The nine selected countries constitute typical examples of EU development efforts in which CCA should be mainstreamed: all are vulnerable to the effects of climate change and the EU is an important aid donor in these countries.

4. CCA mainstreaming in the 2014–2020 cycle

4.1. Agenda setting

The 2014–2020 policy cycle was initiated in an international setting that increasingly emphasised the importance of sustainability within development assistance. Yet, the baseline documents that shape the agenda setting predate this dynamic. The European Commission, 2006 confirms EU commitments to combat climate change through development assistance, while CCA mainstreaming is framed as a central component in the support to Least Developed Countries and small-island states (European Commission (2006), p. 37). While this centrality already shows a high level of salience for integrating CCA in aid activities, it also becomes clear that this policy discourse still is in its infancy, with no clear elaborations on how the issue affects EU development efforts. Thus, CCA integration here can still be perceived as merely 'coordinative', as the importance of centralising CCA in aid activities is mentioned without outlining a clear vision on how to pursue this.

The Agenda for Change (2011) also displays a high level of attention towards CCA, with a more elaborate vision on mainstreaming. Sectoral aid activities within sustainable agriculture and energy are linked to improving climate resilience in partner countries, by promoting capacity building and technology transfers (European Commission, 2011). This focus was clearly incorporated in the instruction notes sent to EU delegations prior to the formulation of the new NIPs (EuropeAid, 2012). Within these notes, CCA was again linked to a range of specific focal sectors like sustainable agriculture, fisheries and food security. Moreover, these sectors were (among others) to be prioritised in the choice of new aid priorities by EU delegations. Also included in the instruction note was a reference to the agreement to make 20% of the spending under the 2014–2020 Multiannual Financial Framework climate compatible (European Commission, 2013). This norm is applicable to all policy domains, and thus has also become a general benchmark in EU development cooperation (Interview 1). It serves as an extra incentive for EU delegations to adopt the vision outlined in the Agenda for Change in their development priorities.

Thus, the agenda-setting prior to the programming of the 2014–2020 aid cycle shows clear signs of harmonising CCA within EU development assistance. In contrast to the 2006 Consensus on Development, the Agenda for Change outlined a clear vision on how a win–win relationship between CCA and aid activities can be established and which sectoral aid activities could specifically benefit the overall climate resilience within partner countries. This vision was clearly communicated to EU delegations and further strengthened by introducing the 20% norm for climate compatible financing.

4.2. Policy process

The programming process initiating a new aid cycle is led by EU delegations within partner countries. They are responsible for submitting a NIP-proposal to the relevant geographical desk officers at DG DEVCO and the External Action Service (EEAS). It contains a first outline of the EU's development priorities for the new aid cycle, structured along a series of focal sectors. These priorities are identified based on consultations with governmental agencies and non-governmental stakeholders.

The Commission has created policy tools in order to assist delegations in mainstreaming environmental objectives – among which CCA – in this initial outlining of development priorities. These guidelines for example recommend delegations to create a country environmental profile. These should contain an analysis of the country's key climate-related challenges and serve as blueprint for the inclusion of CCA in the NIP and concrete projects (European Commission, 2016).

The Commission also created sector scripts for "providing practical

[2] All consulted National Indicative Programmes and AAPs were extracted from the EuropeAid website: https://ec.europa.eu/europeaid/funding/funding-instruments-programming/nipspins_en.

[3] Our operationalisation of the implementation phase thus only includes an assessment of project designs, and not the actual implementation of project on the ground.

Table 2
Operationalised framework.

Level of integration	No integration	Weak integration		Principled priority	Consulted Data
Policy cycle		Coordination	Harmonisation	Prioritisation	
Agenda-setting	- No mentioning of CCA mainstreaming	- CCA mainstreaming framed in guiding policy documents as add-on component in aid activities. - Focus on promoting end-of-pipe measures.	- CCA mainstreaming framed in guiding policy documents as standing on equal terms with aid activities. - Focus on finding win–win solutions between aid activities and CCA-measures.	- CCA mainstreaming framed in guiding policy documents as absolute priority within aid activities. - Focus on installing CCA as overriding objective for aid practitioners.	Guiding policy documents Expert interviews within DG CLIMA and DG DEVCO
Policy process	- No specific procedures for CCA mainstreaming	- Mainstreaming tools intended and used for climate proofing sectoral aid activities (e.g. EIAs).	- Mainstreaming tools intended and used for finding synergies between sectoral aid activities and CCA.	- Mainstreaming tools intended and used for redesigning sectoral aid activities in order to prioritise CCA (e.g. environmental profiles).	- EU Guidelines - Expert interviews within DG CLIMA and DG DEVCO - Expert interviews within EU delegations
Policy output	- No CCA mainstreaming in sectoral policy priorities	- CCA mainstreaming in outlining of sectoral activities limited to incidental mentioning. Not interlinked with sectoral policy priorities.	- Clear image of how CCA affects sectoral activities and/or how sectoral activities can improve climate resilience.	- CCA as central priority along which sectoral activities are structured.	- NIPs - Expert interviews within EU delegations
Policy implementation	- No CCA mainstreaming in project designs	- CCA mainstreaming in project design limited to incidental mentioning, not interlinked with project designs.	- Clear image of how CCA affects the project design and/or how project can improve climate resilience.	- CCA as central priority along which project design is structured.	- AAPs - Expert interviews within EU delegations

guidance on the link between climate change and specific sectors" (European Commission, 2009, p. 2). For CCA specifically, the sector scripts are intended to play a role in "applying a climate change lens to specific policies and planned interventions in order to avoid maladaptation" (European Commission, 2009, p. 8) and thus propose entry points for climate change in a wide range of focal sectors.[4] This should in the end culminate in a multi-sectoral mainstreaming effort, aimed at enhancing societal adaptive capacity through aid activities.

But are these procedural tools actually used in practice? The presence of a country environmental profile is quite rare, and if a delegation does have such a profile at its disposal, it is usually outdated to the point of being irrelevant (Interview 5; 6; 7; 11). In other cases, the availability of a country-owned environmental analysis made a CEP obsolete (Interview 8; 10). Yet, sometimes such analyses within the partner country are also grossly outdated (Interview 6). In addition, our analysis of CCA mainstreaming in different NIPs reveals that sector scripts are not being used to their full extent in order to redesign sectoral activities.

Procedural tools relate to coordination are environmental impact assessments (EIAs) and climate risk assessments. Their purpose is to assess the climate impact or to look at the effect of climate change on the programme/project. Screening exercises should be carried out to see whether such assessments are necessary and whether they have already been conducted by another actor. However, also for these procedures, examples are scarce and perceived added value is low. In most cases, they are not deemed beneficial for mainstreaming, but as 'just another requirement' (Interview 11).

We can thus conclude that the Commission provides tools that – if fully implemented – could instigate the prioritisation of CCA in aid activities: country environmental profiles and sector scripts can inform EU delegations early on in the design of new aid priorities how climate change could be mainstreamed and how these activities could enhance the adaptive capacity of partner countries. In other words, they could invoke policy makers to use a 'climate-lens' to define their priorities for a broad spectrum of potential focal sectors. However, their actual use in practice is low, as can be said for procedures linked to coordination (e.g. EIAs). Although impact assessments are often only a legal requirement for infrastructure projects, we find that they are not perceived to be a real added value for mainstreaming. Regarding the climate risk assessments, most respondents were not even familiar with their existence.

This discrepancy between the objectives of the mainstreaming toolbox and its actual usage has to be perceived in light of a lack of human resources in many EU delegations. Officials frequently voiced a need 'to prioritise' in the context of such constraints, and are thus more preoccupied with general issues (e.g. maintaining a good relation and dialogue with the partner country) rather than specific checklists and procedures (Interview 9). Thus, the technicality and workload that these procedures imply, tends to undermine their use.

4.3. Policy outcome

Our findings from the previous phases of the policy cycle are confirmed in the choice of focal sectors in the final versions of the NIPs: all NIPs include one or two focal sectors that fall under the scope of CCA-relevant sectors as intended by the Commission. According to Herrero, Galeazzi & Krätke (2013), this applies to the whole of EU bilateral aid programming. This implies that the harmonisation effort in the agenda-setting phase bears fruit, as delegations pick up on this increased salience of CCA, something that was also apparent throughout our interviews. Regarding sustainable agriculture and food security, the

[4] The sectors with specific mainstreaming scripts include agriculture and rural development, biodiversity, education, energy, health, infrastructure and transport, waste management, trade & investment and water & sanitation (European Commission, 2009).

discourse used within NIPs echoes the argumentation for CCA mainstreaming in the agenda-setting phase: activity in these sectors is perceived beneficial for improving climate resilience and adaptation capacity for local populations. Yet, evidence of prioritising CCA is much more scarce, as the main priority within these sectors remains the increase of agricultural output and economic growth. The evidence provided in the Appendix shows that CCA measures are mostly framed as one of the preconditions for this to succeed, but are almost never the main priority of sectoral interventions.

In focal sectors that are not linked to CCA mainstreaming in the agenda-setting phase but covered by the Commissions' sector scripts (e.g. governance and educational support), our research shows more variation in CCA inclusion. These range from harmonisation to no CCA-reference at all. In some sectors, only a coordinative effort can be distinguished: introducing a standard sentence in which mainstreaming is ensured through impact assessments 'in accordance with EU guidelines'. As explained earlier, the actual use of these procedures within these focal sectors can be put into question, and it might be the case that a standard sentence is added in order to what one respondent called 'keeping Brussels happy' (refering to DEVCO) (Interview 4). Moreover, clear views of how climate change affects these sectors and what interventions would be feasible in this regard are often lacking.

4.4. Implementation phase

Our analysis of Annual Action Programmes (cf. Table A2 in Appendix A) once again indicates that CCA mainstreaming is most likely to be upheld in projects situated within focal sectors related to agriculture and rural development. In other words, the level of CCA mainstreaming is most likely to remain 'stable' between the design and implementation phases in these sectors. Climate change is almost standardly included in such projects as a factor that could undermine sectoral activities. Therefore, projects almost always include a component that specifically targets resilience building or the introduction of climate-smart technologies. In other focal sectors, evidence suggests that mainstreaming efforts have an increased chance of becoming diluted in the formulation phase (e.g. projects within secondary education sector in Malawi, within the good governance sector in Uganda, and within the energy sector in Zambia).

5. Discussion and policy relevance

Several notable insights can be drawn from our analysis. First, the Commission harmonises CCA in EU aid activities by emphasising the link between aid activities related to sustainable agriculture, rural development, food security and climate resilience in partner countries. This win–win approach is incorporated in the Agenda for Change and the instruction notes sent to EU delegations in the early stages of the policy cycle. This harmonisation dynamic is generally upheld throughout the different policy phases. Indeed, the nine selected EU delegations all include these focal sectors in their aid activities and structure their intervention logic based on the link between these sectoral activities and climate resilience.

Interestingly, the Commission goes beyond this harmonisation effort in the procedural phase: we described an elaborate toolbox to take mainstreaming the extra mile. The use of a country environmental profile could trigger a broader redefinition of aid activities based on the environmental- and climatic situation in a partner country, which could lead to the prioritisation of CCA. The same goes for sector scripts, which envisage a broader mainstreaming effort than apparent in the agenda-setting phase. However, these tools are far less effective than they should be. Together with other procedures like EIAs and climate risk assessments, their use and perceived added value can be described as low or even non-existent.

This leads us to a first answer on the question 'what works' in the EPI/CPI literature (Persson et al. this issue): procedural tools do not seem to be of particular importance for current mainstreaming efforts. The question then remains what drives this high level of mainstreaming. The most suitable explanation is that the political to mainstream CCA is high within the Commission and seems to be growing still. The normative commitment towards CCA mainstreaming was clearly incorporated in the agenda-setting, despite the fact that the guiding documents predate the 2030 agenda for sustainable development. The renewed Consensus for Development (2017) further confirms that the attention towards CCA mainstreaming is still growing: a lot of emphasis is put on linking the Paris Agreement on climate change with the Sustainable Development Goals, and to 'maximise synergies' between these two global agendas (European Commission, 2017, p. 20). This tightening link between the Paris Agreement and the SDG agenda seems promising in light of mainstreaming CCA, and could further boost the impetus within delegations for prioritising the issue in their aid activities.

The EU also actively pursues diplomatic relations with third countries in the context of the international climate negotiations. These 'green diplomacy' efforts are coordinated by the EEAS and implemented by EU delegations and member state embassies, which engage in dialogue with partner countries, organising outreach events etc. These diplomatic efforts also positively influence development cooperation: the EU reinforced its dialogue with African countries in order to assist them in formulating their Intended Nationally Determined Contributions,[5] which also led to a better knowledge of its impacts in different development sectors (Interview 6, 7, 8, 11). In the future, NDCs could serve as a bridge between both international regimes if they are embedded in national development plans and the sustainable development goals (GCCA+ 2016, p. 7). This could drastically improve the knowledge on CCA effects within EU delegations, and could be a promising alternative for the environmental profiles, which are irrelevant in current mainstreaming efforts.

Linking back to the CPI/EPI literature (cf. Persson, 2008), the normative approach – articulating the political will for mainstreaming through high level policy commitments and the reallocation of resources – thus can be considered an important driver of current mainstreaming efforts. This compensates for the ineffectiveness of the procedural approach. Respondents frequently pointed at institutional and organizational barriers for explaining this ineffectiveness: delegations often need to operate in a context of constraints in terms of staff and expertise, while the oversupply in procedural requirements generates competition between different tasks and thematic issues within delegations, and adds to a sense of mainstreaming 'fatigue' (Interview 8; 11).

Yet, additional barriers – although not as explicit – can be identified on the delegation level. In terms of expertise for example, every delegation currently has a climate focal point at its disposal. Officials functioning as 'climate focal persons' generally also hold sectoral responsibilities related to agriculture and food security. This again adds up with the high level of mainstreaming in these focal sectors in different delegations. These focal persons can also play an important role in facilitating climate-awareness within these settings. Yet, some respondents explicitly stated that climate change was a non-issue in their delegation before their arrival (Interview 4, 8). This indicates the existence of cognitive barriers – related to normative convictions and values among policy makers – outside of these focal points. In other words, policy officials outside of these focal points may be less convinced of the need for CCA mainstreaming, which could also explain why a 'broader' mainstreaming effort – in a wider range of focal sectors – has not yet materialized.

[5] INDCs outlined the commitment regarding climate action of a country in the run up to COP21 in Paris. As soon as a country ratifies the Paris Agreement, it formally commits to its intended actions, and the INDC becomes an NDC (World Resources Institute, 2017).

Currently, technical and financial assistance for delegations is provided through the Global Climate Change Alliance (GCCA+). However, its impact remains limited, with different respondents reporting different levels of cooperation with the agency. This ranged from receiving actual coaching and expertise (Interview 7) to more 'shallow' relationships based on annual reporting of projects (Interview 12) or financial support (Interview 9). Although the GCCA+ is a promising for becoming a 'hub' for expertise on CCA mainstreaming (GCCA+, 2015), these different levels of cooperation – together with the differences in mainstreaming efforts observed in our analysis of NIPs and AAPs – indicate that mainstreaming efforts tend to vary among EU delegations (cf. Appendix). Although it is beyond the scope of this paper to pinpoint the factors that lead to this variation, it confirms Moser & Ekstrom's (2010) argument that feasible strategies for further improving mainstreaming are always context-sensitive, and cannot be reduced to a simplistic call for 'adaptive capacity building'. Therefore, although the GCCA+ can play an important role in further strengthening capacity and expertise in delegations, it seems justified to argue that the effectiveness of efforts to further improve mainstreaming in EU delegations will not only be achieved through such initiatives. Strengthening mainstreaming will also be determined by some specific factors within delegations, related to political leadership and the will to mainstream CCA among policy makers.

6. Conclusions

This paper provided a comprehensive analysis of CCA mainstreaming in EU development efforts for the 2014–2020 policy cycle. Already in its early stages, we find clear harmonisation efforts by the Commission: the guiding documents explicitly envision a win–win approach between development cooperation and CCA, by linking aid activities related to sustainable agriculture, rural development and food security to support for climate resilience. This harmonisation approach was upheld throughout the policy cycle: all assessed NIPs contain a focal sector in this regard and all of these in their turn show high levels of mainstreaming. We can draw similar conclusions on the project design. Linking back to the EPI/CPI literature (e.g. Persson, 2008), we can conclude that the normative approach towards CCA mainstreaming within the EU is well-developed. The political will to mainstream CCA in aid activities is apparent in high-level commitments by the Commission, and is further reinforced through the 20% norm for climate compatible financing.

The fact that we perceive a top-down political will for CCA mainstreaming in combination with a reallocation of resources already nuances many of the described barriers in the EPI/CPI literature (cf. Uittenbroek et al., 2013). This can be explained by strong functional overlap between CCA and development cooperation: both domains are increasingly interlinked and aid can contribute to building adaptive capacity. This leads to an increasing connection between the 2030 agenda for sustainable development with countries' NDCs under the Paris agreement. This could very well provide further impetus to the CCA mainstreaming effort within EU development cooperation, as NDCs could become the 'climate-lens' through which development activities could be redesigned. The fact that these NDCs are country-owned also ensures that mainstreaming efforts are jointly agreed upon, in order to prevent CCA mainstreaming becoming some kind of conditionality (Gupta, 2009).

However, at the delegation level, we determined a sense of procedural overburdening in the wake of limited staff, and a lack of expertise among different officials with different sectoral responsibilities. Past assessments of climate mainstreaming in EU development already pointed at insufficient in-house capacity for mainstreaming, leading to practitioners not using available mainstreaming tools (Olearius et al., 2008). The presence of focal points for mainstreaming is already a positive development and can be linked to the harmonisation effort by the Commission within a well-defined set of focal sectors. Prioritisation would however imply that policy makers use a climate lens to redesign sectoral activities in the wake of CCA. Although sector scripts and environmental profiles are part of the procedural toolbox, they are currently ineffective in generating a broader mainstreaming effort.

The efforts of the GCCA+ to becoming a hub for expertise regarding climate mainstreaming could take away many of these obstacles. The GCCA could further centralise ownership and expertise for CCA mainstreaming, and could strengthen its ties with EU delegations in order to provide them with the expertise necessary. So far, the role and functioning of the GCCA has not yet received any serious academic scrutiny. However, the fact that it aims to serve as a centralised centre of expertise regarding the link between development cooperation and CCA could make it an interesting case for further research into potential CPI/EPI strategies.

However, the observed variation between mainstreaming efforts throughout different delegations indicates that the context in which these efforts are implemented also plays a role. Further research could therefore extend empirical knowledge in this regard by scrutinising mainstreaming efforts in the field. Such research could for example focus on how the political leadership in delegations and the awareness towards CCA in the heads of policy officials influence mainstreaming. Furthermore, researchers could contextualise these efforts in the country in which they are implemented and also examine how partner countries' agency influences mainstreaming efforts of donors.

Finally, since the current development cycle is still ongoing, this research only represents a partial overview of CCA mainstreaming throughout the policy cycle. This article identified a number of obstacles regarding CCA mainstreaming efforts, as well as possibilities to improve these efforts even within the current policy cycle. Future research could complement this by looking at the entire policy cycle, including the role of policy monitoring and evaluation in identifying possibilities for improvement.

Funding

This work was supported by the Research Foundation Flanders [grant number 11ZU217N].

Acknowledgments

An earlier version of this paper was presented in July 2017 at the mini-symposium on 'European and Global Dimensions of Sustainability' in Glasgow. We thank all participants for their comments. We also thank the editors of this issue and the two reviewers for their comments and feedback.

Appendix A. CCA inclusion in policy output and implementation phase

See Table A1

Table A1
Level of CCA mainstreaming in policy output (based on NIPs, disseminated per focal sector).

Country	No CCA inclusion	Coordination		Harmonisation		Prioritisation	
		Focal sector	Evidence	Focal sector	Evidence	Focal sector	Evidence
Angola		Water & Sanitation	Use of Environmental Impact Assessments "in accordance with the provisions of the EU guidelines" (p. 20)	Support for technical and vocational training	Specialised CCA courses in training programmes.	Sustainable Agriculture	Improving sustainability of agriculture in context of climate change as main priority. Support for climate-smart technologies in order to build resilience.
Ethiopia	Energy	Road infrastructure	Standard sentence on the need to mainstream environmental concerns.	Sustainable agriculture and food security	Production growth, yet with attention to strengthening resilience in the context of climatic shocks.		
				Health	Climate change "affecting both social and environmental determinants of health" (p. 8). Focus on improving these environmental determinants.		
Ghana	Employment and social protection; Governance			Productive investments for agriculture in Savannah Ecological Zones	Rapid increase of production output and job creation. Attention for climate change adaptation in order to ensure an "inclusive and sustainable rural economy" (p. 20)		
Malawi		Governance	Use of Environmental impact assessments	Sustainable Agriculture	Yield increase of agricultural production in order to combat malnutrition and to increase commodity exports. Resilience of local populations against climate change needed.		
		Secondary education/ vocational training	Use of environmental impact assessments and climate risk assessments mentioned (p. 21)				
Niger	State capacity building; Security and peace building	Improve access to conflict-prone regions	Use of Environmental impact assessments			Food security and resilience	Enhancing resilience and food security in the wake of climate change and environmental disasters dubbed main priority in this sector. Activities include the introduction of sustainable farming techniques, reinforcing tenure rights etc.
Sierra Leone		Government and civil society	Use of Environmental Impact Assessments and Strategic Environmental Assessments.	Education	Climate change awareness should be promoted through educational curricula. Incorporating climate risk in the design of educational facilities.		
				Agriculture and Food Security	Recognition of long-term negative impact of climate change in the sector. Focus on production growth with attention to CCA.		
Chad		Support for the rule of law	Use of Environmental Impact Assessments.	Food security	Weakness of production and purchasing power within agricultural sector linked to climate change. Changing climate recognised as context in which food security needs to be improved.		
				Natural resource management	Natural resource degradation due to climate change acknowledged as overarching context for sectoral activities.		
Uganda		Transport infrastructures	Use of Environmental Impact Assessments	Food security and agriculture	Supporting the green economy and production growth with attention towards climate resilience		
		Good governance	Use of Environmental Impact Assessments				
Zambia	Democratic governance			Support to energy sector	Decreasing climate vulnerability through access to non-biomass energy sources and increasing access to electric energy (p. 9).		
				rural poverty, food security and sustainable agriculture	Increasing CCA through the promotion of sustainable soil management and agroforestry practices		

Table A2
Level of CCA mainstreaming in implementation phase (based on AAPs, disseminated per project).

Country	No CCA inclusion	Coordination		Harmonisation		Prioritisation	
		Project ('corresponding focal sector in NIP')	Evidence	Project ('corresponding focal sector in NIP')	Evidence	Project ('corresponding focal sector in NIP')	Evidence
Angola				Revitalização do Ensino Técnico e da Formação Profissional ('Support for technical and vocational training')	Pledge to mainstream climate change in all technical and professional trainings – as mentioned in the NIP – upheld.		
Ethiopia	Biogas dissemination scale-up project ('Energy'); EnDev Ethiopia: off-grid energy solutions ('Energy')			Agricultural Growth Programme ('Sustainable agriculture and food security')	Production increase and commercialisation remains priority. Strengthening resilience through climate-smart agriculture is cross-cutting issue throughout project design. Concrete measures include for example enhanced small scale irrigation schemes.	Sustainable Land Management Programme ('Sustainable agriculture and food security')	CCA dubbed main priority in this project, through a wide range of land management projects, including integrated water management and capacity building with management server providers.
Ghana	Ghana employment and social protection programme (GESP) ('Employment and social protection)	Anti-corruption, rule of law and accountability programme ('Governance')	Climate change not interwoven in project design. But small part on providing 'some support' to National Committee for Civic Education to promote climate change vis-à-vis the EPA (p. 7).	Civil Society Organisations in Research and Innovation for Sustainable Development[a]	CSOs (e.g. farmer's organisations, university) framed as partners in sectoral activities regarding climate-smart agriculture.		
Malawi	Skills and Technical Education Program ('Secondary education/vocational training'); Improving secondary education in Malawi ('Secondary education/ vocational training')	Rural roads improvement programme ('Sustainable agriculture')	Climate proofing of road design in order to mitigate expected intensification of rainfall patterns.	KULIMA – promoting farming in Malawi ('Sustainable agriculture')	Agricultural growth central objective, but needs to be climate-smart/resilient. This will be addressed by targeting soil-fertility, land degradation and addressing soil fertility.		
				AFIKEPO nutrition programme ('Sustainable agriculture')	Climate change acknowledged as an immediate cause of undernutrition. Therefore linked to actions on climate-resilient agricultural production.		
Niger				No Annual Action Plans published			
Sierra Leone	Support for the education sector ('Education')			Boosting agriculture and Food Security (BAFS)	Specific objective to "Promote innovative and integrated farming concepts adapted to climate change" (p. 2)		
Chad				No Annual Action Plans published			

(*continued on next page*)

Table A2 (*continued*)

Country	No CCA inclusion	Coordination		Harmonisation		Prioritisation	
		Project ('corresponding focal sector in NIP')	Evidence	Project ('corresponding focal sector in NIP')	Evidence	Project ('corresponding focal sector in NIP')	Evidence
Uganda	Support to Uganda's Financial Management and Accountability Programme ('Good governance'); Civil Society in Uganda Support Programme ('Civil Society')	Support for further development of the Northern Corridor road axis in Uganda – Kampala-Jinja expressway ('Transport infrastructures')	Climate-proofing of project design.	Development initiative for Northern Uganda (cross-cutting, all focal sectors targeted)	Building resilience to climate change through sustainable farming practices. + Climate proofing of infrastructure envisioned under the programme.		
				Institutional capacity building for transport sector ('Transport infrastructures')	Building climate resilience by developing tools for improving adaptation measures, as well as climate-proofing transport infrastructure.		
				Oriented and environmentally sustainable Beef-Meat value chain in Uganda ('Food Security and Agriculture')	Adaptation interventions based on conducted-c. Adopting climate-smart technologies for meat producers.		
				Promoting commercial aquaculture in Uganda ('Food security and agriculture')	Climate change impacts on aquatic ecosystems considered a risk. Climate resilient production as one of main objectives of activities.		
Zambia	Aviation sector support programme (not linked to specific focal sector); Programme for legal empowerment and enhanced justice delivery ('Democraticgovernance'); Lusaka Transmission Distribution Rehabilitation ('Energy')	Support for Zambia energy sector ('Energy')	Some notion of impact assessments to mitigate climate risk and indirect benefits for adaptation.				

[a] Cross-cutting project that targets both employment & social protection as well as the agriculture focal sectors.

Appendix B. List of interviews

No	Date	Function
1	16/1/2015	official DG DEVCO
2	10/2/2015	official DG CLIMA
3	12/2/2015	Delegation staff
4	16/2/2015	Delegation staff
5	8/6/2016	Delegation staff
6	9/6/2016	Delegation staff
7	13/6/2016	Delegation staff
8	13/6/2016	Delegation staff
9	14/6/2016	Delegation staff
10	23/6/2016	Delegation staff
11	23/6/2016	Delegation staff
12	5/7/2016	Delegation staff

References

Adelle, C., Russel, D., 2013. Climate policy integration: a case of déjà vu? Environ. Policy Govern. 23 (1), 1–12.

ECA, 2006. Court of Auditors Special Report No. 6/2006 Concerning the Environmental Aspects of the Commission's Development Cooperation. ECA, Brussels.

EuropeAid, 2012. Instructions for the Programming of the 11th EDF and DCI −2014-2020. EuropeAid, Brussels.

European Commission, 2006. The European Consensus on Development. European Commission, Brussels.

European Commission, 2009. Responding to Climate Change. Sector Scripts: Introduction and Key Concepts. European Commission, Brussels.

European Commission, 2011. Increasing the Impact of EU Development Policy: An Agenda for Change. European Commission, Brussels.

European Commission, 2013. An EU Budget for Low-carbon Growth. European Commission, Brussels.

European Commission, 2016. Integrating Environment and Climate Change into EU International Cooperation and Development. European Commission, Brussels.

European Commission, 2017. The New European Consensus on Development: Our World, Our Dignity, Our Future. European Commission, Brussels.

GCCA+, 2015. The Plus of GCCA+. GCCA+, Brussels.

GCCA+, 2016. Linking (I)NDCs to National Development Strategies and Other Climate Plans. GCCA+, Brussels.

Gupta, J., van der Grijp, N., 2010. Mainstreaming Climate Change in Development Cooperation: Theory, Practice and Implications for the European Union. Cambridge, Cambridge University Press.

Gupta, J., 2009. Climate change and development cooperation: trends and questions. Curr. Opin. Environ. Sustain. 1 (2), 207–213.

Gupta, J., 2010. Mainstreaming climate change: a theoretical exploration. In: Gupta, J., van der Grijp, N. (Eds.), Mainstreaming Climate Change in Development Cooperation: Theory, Practice and Implications for the European Union. Cambridge University Press, Cambridge, pp. 67–92.

Herrero, A., Galeazzi, G., Krätke, F., 2013. Early Experiences in Programming EU Aid 2014–2020: Charting the Agenda for Change. ECDPM, Brussels.

Huq, S., Reid, H., 2004. Mainstreaming adaptation in development. IDS Bull. 35 (3), 15–21.

Klein, R.J., Eriksen, S.E., Næss, L.O., Hammill, A., Tanner, T.M., Robledo, C., O'brien, K.L., 2007. Portfolio screening to support the mainstreaming of adaptation to climate change into development assistance. Clim. Change 84 (1), 23–44.

Lafferty, W., Hovden, E., 2003. Environmental policy integration: towards an analytical framework. Environ. Polit. 12 (3), 1–22.

Lauer, H., Eguavoen, I., 2016. Mainstreaming climate change adaptation into development in the Gambia: a window of opportunity for transformative processes? In: Filho, W. (Ed.), Innovation in Climate Change Adaptation. Springer, Zurich, pp. 87–98.

Moser, S.C., Ekstrom, J.A., 2010. A framework to diagnose barriers to climate change adaptation. Proc. Natl. Acad. Sci. 107 (51), 22026–22031.

Nilsson, M., Persson, Å., 2017. Policy note: lessons from environmental policy integration for the implementation of the 2030 Agenda. Environ. Sc. Policy 78, 36–39.

Olearius, A., Riesco, I.L., Nicholson, S., 2008. From an European Court of Auditors' Report to a Learning Process? The Challenge to Integrate the Environment into the European Community's Development Assistance.

Persson, Å., 2008. Mainstreaming Climate Change Adaptation into Official Development Assistance: A Case of International Policy Integration. EPIGOV Papers(36).

Peskett, L., Grist, N., Hedger, M., Lennartz-Walker, T., Scholz, I., 2009. Climate Change Challenges for EU Development Co-operation: Emerging Issues. EDC 2020 Working Paper No.3.

Runhaar, H., Driessen, P.P., Soer, L., 2009. Sustainable urban development and the challenge of policy integration: an assessment of planning tools for integrating spatial and environmental planning in the Netherlands. Environ. Plann. B: Plann. Des. 36 (3), 417–431.

Runhaar, H., Driessen, P., Uittenbroek, C., 2014. Towards a systematic framework for the analysis of environmental policy integration. Environ. Policy Govern. 24 (4), 233–246.

Seawright, J., Gerring, J., 2008. Case selection techniques in case study research: a menu of qualitative and quantitative options. Polit. Res. Quart. 61 (2), 294–308.

Uittenbroek, C.J., Janssen-Jansen, L.B., Runhaar, H.A., 2013. Mainstreaming climate adaptation into urban planning: overcoming barriers, seizing opportunities and evaluating the results in two Dutch case studies. Reg. Environ. Change 13 (2), 399–411.

World Resources Institute, 2017. What Is an INDC? (Retrieved from http://www.wri.org/indc-definition).

Frederik De Roeck is a PhD researcher at the Centre For EU Studies at Ghent University (Belgium), with a scholarship funded by the Research Foundation Flanders (FWO). His research focuses on the integration of climate change adaptation in EU development cooperation.

Jan Orbie is an associate professor at the Department of Political Science and Director of the Centre for EU Studies at Ghent University. His research concerns the external relations of the European Union.

Sarah Delputte is a postdoctoral assistant at the Centre for EU Studies, and a lecturer at the Department of Political Science at Ghent University. Her primary research focus is on the EU's development policy.